APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/454,758	12/06/1999	PER JOHANSSON	040000-625	4205

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EXAMINER
NGUYEN, HANH N

ART UNIT	PAPER NUMBER
2662	

DATE MAILED: 09/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _Application filed on 07/11/03_ .

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-11_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☒ Claim(s) _5 and 11_ is/are allowed.

6) ☒ Claim(s) _1-4 and 6-10_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _11 July 2003_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____ .

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 4, 6, 7, 8 are rejected under 35 USC 103(a) as being unpatentable over

Ramanathan (US Pat. No. 6,577,613 B1) in view of **Robinson et al.** (US Pat. No. 6,122,291).

In claims 1, 6 and 7, **Ramanathan** discloses an Ad-Hoc network 102 (Fig.1) which is

described in Fig.4A as follow: server 108 (first terminal) receives a channel request from a

terminal at step 402 (a second terminal) (a first terminal receives a request from a second

terminal). Server 108 determines whether the requested bandwidth is available at step 403

(determining if the first terminal has sufficient available capacity to accommodate the request).

If the server 108 has sufficient bandwidth, server sends a clear-to-send signal to the terminal

which allows the terminal to transmit data. See col.6, lines 42-55. **Ramanathan** does not

disclose the first terminal compares the capacity allocation of the first terminal to the capacity

allocation of the second terminal to determine mutually acceptable capacity blocks allocable to

satisfy the request; and the first terminal modify its capacity allocation.

Robinson et al. discloses in Fig.3, a master device 44 (a first terminal), after receiving a

bandwidth request from a slave device 30 (a second terminal), compares capability of master

device 44 (capacity allocation of the first terminal) to the preferred bandwidth of slave device 30

(capacity of the second terminal) in order to obtain allowable bandwidth (determining capacity to

satisfy the request). See col.5, lines 1-11. In addition, the master device 44 (the first terminal)

modifies its bandwidth for allocating to the slave terminal 30 (second terminal). See col.2, lines

7-15.

Therefore, it would have been obvious to one of ordinary skills in the art to modify

Ramanathan by implementing the method of comparing the master station 's capability to the

slave station 's requested capacity of **Robinson et al.** during determining whether the first

terminal has sufficient capacity to accommodate the request. The motivation is to provide

bandwidth request to terminal as needed.

In claim 4, **Ramanathan** discloses, in Fig.4A, if the requested bandwidth at step 403 is

not available, the server does not transmits any response to the terminal, then the terminal stops

transmitting requests (data message indicating rejecting the request). See col.6, lines 52-60.

In claim 8, **Ramanathan** does not disclose transmitting a data message from the first

terminal to a third terminal. **Robinson et al.** discloses, in Fig.3, when a slave device (a third

terminal) wants to alter its requested bandwidth, the master device 44 sends a control sequence (

a data message) defining bandwidth to be used (the first terminal transmits to a third terminal a

message including information representative of the first terminal 's modified capacity). See

col.6, lines 20-25. Therefore, it would have been obvious to modify the **Ramanathan** by

combining with **Robinson et al.** in order to obtain the claimed limitation.

Claims 9 and 10 are rejected under 35 USC 103(a) as being unpatentable over

Ramanathan (US Pat. No. 6,577,613 B1) in view of **Robinson et al.** (US Pat. No. 6,122,291),

and further in view of **Scheurich** (US Pat. No. 5,848,266).

In claims 9 and 10, **Ramanathan** discloses an Ad-Hoc network 102 (Fig.1) which is

described in Fig.4A as follow: server 108 (first terminal) receives a channel request from a

terminal at step 402 (a second terminal) (a first terminal receives a request from a second

terminal). Server 108 determines whether the requested bandwidth is available at step 403

(determining if the first terminal has sufficient available capacity to accommodate the request).

If the server 108 has sufficient bandwidth, server sends a clear-to-send signal to the terminal

which allows the terminal to transmit data. See col.6, lines 42-55. **Ramanathan** further

discloses, in Fig.2, a memory 203 (a memory module), a processor 202 (a processor module).

Ramanathan does not disclose the request including a digital representation of the

second terminal 's capacity allocation; the first terminal compares the capacity allocation of the

first terminal to the capacity allocation of the second terminal to determine mutually acceptable

capacity blocks allocable to satisfy the request; and the first terminal modify its capacity

allocation.

Robinson et al. discloses in Fig.3, a master device 44 (a first terminal), after receiving a

bandwidth request from a slave device 30 (a second terminal), compares capability of master

device 44 (capacity allocation of the first terminal) to the preferred bandwidth of slave device 30

(capacity of the second terminal) in order to obtain allowable bandwidth (determining capacity to

satisfy the request). See col.5, lines 1-11. In addition, the master device 44 (the first terminal)

modifies its bandwidth for allocating to the slave terminal 30 (second terminal). See col.2, lines 7-15.

Scheurich discloses, in Fig.1, a request for bandwidth from an agent (a second terminal) comprising a digital presentation (request including a digital representation of the second terminal 's capacity allocation). See col.3, lines 27-30.

Therefore, it would have been obvious to one of ordinary skills in the art to use the master and slave devices of **Robinson et al.** and the digital representation of **Scheurich** into **Ramanathan** to modify bandwidth in ad-hoc network. The motivation is to fluctuate bandwidth transmissions associated with demanded data between terminals.

Claims 2 and 3 are rejected under 35 USC 103(a) as being unpatentable over **Ramanathan** (US Pat. No. 6,577,613 B1) in view of **Robinson et al.** (US Pat. No. 6,122,291), and further in view of **Szabo** (US Pat. No. 5,592,469).

In claim 2, **Ramanthan** does not disclose parameter represents priority class of desired capacity allocation, and capacity allocated by the first terminal to priority class lower than the priority class parameter in the request from the second terminal. **Robinson et al.** discloses, in Fig.3, that the request for bandwidth from the slave terminal 30 (request from the second terminal) comprises a minimum/maximum bandwidth limits via a control message (represent a priority class of a desired capacity allocation). See col.5, lines 1-4 & line 65 to col.6, line 2. (Note: according the specification, page 21, lines 20-28, the claimed "the priority class" is described as a "best effort" level. Therefore, examiner considers the "priority class of the desired capacity" as the "minimum/maximum bandwidth" requested by the subscriber). **Szabo** discloses

the base station can provide smaller transmission capacity (lower priority class) than the

requested capacity (requested priority class), given a minimum quality is specified (priority class

lower than the priority class parameter in the request from the second terminal). See col.9, lines

20-25. Therefore, it would have been obvious to one of ordinary skills in the art to modify the

Ramanthan by adding the feature of allocating smaller capacity of **Szabo** and the described

features of **Robinson** so that the first terminal can allocate its capacity to the second terminal

below the requested maximum capacity limit, with a minimum capacity given. The motivation

of the combination is to fluctuate transmission rates (capacity) allocation to the second terminal

in different demands; and to maintain quality of service of the transmission capacity in an

acceptable range.

In claim 3, **Ramanathan** does not disclose request from the second terminal represent a

priority class of a desired capacity allocation; and capacity allocated by the first terminal to

priority equal to and lower than the priority class in the request from the second terminal.

Robinson et al. discloses, in Fig.3, that the request for bandwidth from the slave terminal 30

(request from the second terminal) comprises a minimum/maximum bandwidth limits via a

control message (represent a priority class of a desired capacity allocation). See col.5, lines 1-4

& line 65 to col.6, line 2. (Note: according the specification, page 21, lines 20-28, the claimed

"the priority class" is described as a "best effort" level. Therefore, examiner considers the

"priority class of the desired capacity" as the "minimum/maximum bandwidth" requested by the

subscriber). In addition, the master device 44 (the first terminal) maximises its information

transmission (capacity) to the slave device 30 by setting its minimum/maximum limits (first

terminal 's priority class) to correspond to (equal to) a maximum information capacity requested

(second terminal 's priority class) by the slave device (requested capacity) (capacity allocated by

the first terminal to priority equal to the priority class in the request from the second terminal).

(See Robinson , col.5, line 65 to col.6, line 2). **Szabo** discloses the base station can provide

smaller transmission capacity (lower priority class) than the requested capacity (requested

priority class), given a minimum quality is specified (priority class lower than the priority class

parameter in the request from the second terminal). See col.9, lines 20-25.

Therefore, it would have been obvious to one of ordinary skills in the art to modify the

Ramanathan by adding the features of allocating smaller/corresponding capacities of **Szabo** and

the features described in **Robinson et al.** so that the first terminal can allocate its capacity to the

second terminal below the requested maximum capacity limit, with a minimum capacity given;

or equal to the requested maximum capacity. The motivation of the combination is to fluctuate

transmission rates (capacity) allocation to the second terminal in different demands; and to

maintain quality of service of the transmission capacity in an acceptable range.

Response to Arguments

Applicant's arguments with respect to claims 1-4 and 6-10 have been considered but are

moot in view of the new ground(s) of rejection.

Allowable Subject Matter

Claims 5 and 11 are allowed over the prior art

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Szabo (US pat. No. 5,592,469) discloses Radio System.

Anvekar et al. (US Pat. No. 6,377,805 B1) discloses Maintaining Data Communication Through Neighboring Mobile Units During Handoff.

Kumar et al. (US Pat. No. 6418148 B1) discloses Burst-Level Resource Allocation in cellular Systems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Nguyen whose telephone number is 703 306-5445. The examiner can normally be reached on Monday-Friday 8:00 AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 703 306-4744. The fax phone numbers for the organization where this application or proceeding is assigned are 703 305-3988 for regular communications and 703 308-9051 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-4700.
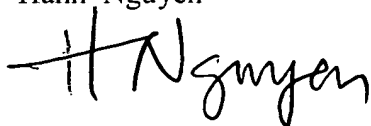
Fax number : 703 872-9314

Hanh Nguyen

September 9, 2003